



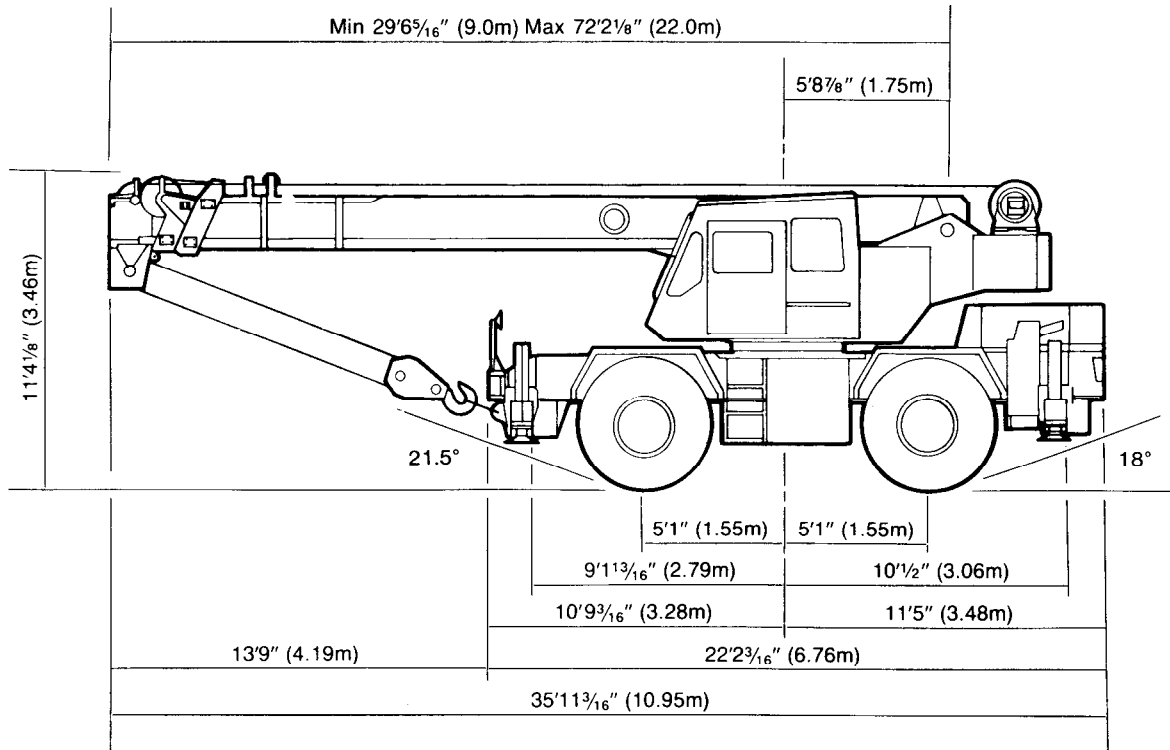
TR-280XL

28 Ton Capacity (25.4 Metric Tons)

HYDRAULIC ROUGH TERRAIN CRANE

DIMENSIONS

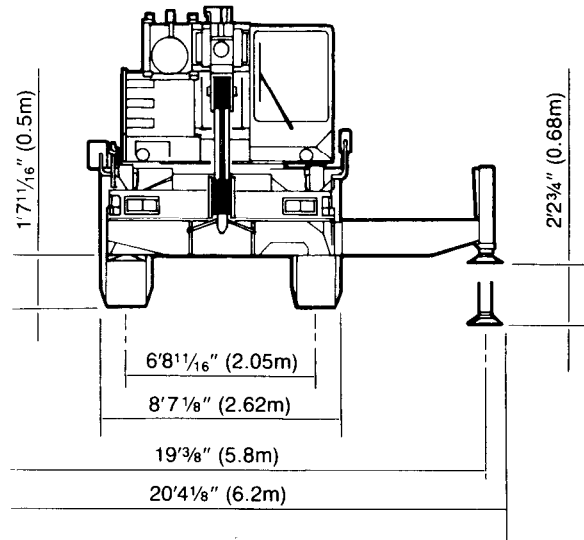
(20.5 X 25 Tires)



GENERAL DIMENSIONS

(20.5 X 25 Tires)

| | Feet | Meters |
|--------------------------|-------------|--------|
| Tail swing counterweight | 9' 8 1/8" | 2.95 |
| Turning Radius: | | |
| 4 wheel steer | 20' 11 3/4" | 6.4 |
| 2 wheel steer | 35' 9 1/8" | 10.9 |



MDI/TADANO
XL SERIES

CRANE SPECIFICATIONS

BOOM

Three section full power synchronized telescoping boom, 29.5'~72.2' (9.0~22.0m), of box construction with four sheaves, 12 5/8" (320 mm) root diameter, at boom head. The synchronization system consists of a telescope cylinder, an extension cable and retraction cable. Hydraulic cylinder fitted with holding valve. Two easily removable wire rope guards, rope dead end provided on right side of boom head. Boom telescope sections are supported by wear pads both vertically and horizontally.

BOOM ELEVATION - By a double acting hydraulic cylinder with holding valve. Elevation 0°~82°, combination controls for hand or foot operation. Boom angle indicator.

JIB - Single stage lattice type, 5°, 25°, or 45° offset (tilt type). Single sheave, 13 7/8" (352 mm) root diameter, at jib head. Stored along side base boom section. Jib length is 24.6' (7.5m)

AUXILIARY LIFTING SHEAVE (SINGLE TOP) - Optional. Single sheave, 12 5/8" (320 mm) root diameter. Mounted to main boom head for single line work. (Stowable.)

ANTI-TWO BLOCK - Pendant type over-winding cut out device with audio-visual (FAILURE lamp/BUZZER) warning system.

SWING

Hydraulic axial piston motor driven through planetary swing speed reducer. Continuous 360° full circle swing on ball bearing turntable at 3.4 rpm. Equipped with manually locked/released swing brake. A swing lock (pin-in-hole lock) for pick and carry and travel modes, manually engaged in cab.

HOIST

MAIN HOIST - Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and raising. Equipped with automatic brake (Neutral brake) and counterbalance valve. Controlled independently of auxiliary hoist.

DRUM - Grooved 12 5/8" (320 mm) root diameter x 19 1/16" (0.4845 m) wide. Wire rope: 492 ft. of 5/8" diameter rope (150m of 16mm). Drum Capacity: 734 ft. (223.6m) 6 layers. Maximum line pull (permissible): 10, 078 lbs. (4,571 kg)*. Maximum line speed: 351 FPM (107 m/min).

AUXILIARY HOIST - Optional. Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and raising. Equipped with automatic brake (neutral brake) and counterbalance valve. Controlled independently from main hoist.

DRUM - Grooved 12 5/8" (320 mm) root diameter x 10 3/8" (0.2635 m) wide. Wire rope: 223 ft. of 5/8" diameter rope (68m of 16mm). Drum capacity: 399 ft. (121.6m) 6 layers. Maximum line pull (permissible): 10, 078 lbs. (4,571 kg)*. Maximum line speed: 351 FPM (107m/min).

*Maximum permissible line pull may be affected by wire rope strength.

WIRE ROPE - Filler wire, extra improved plow steel, pre-formed, independent wire rope core, right regular lay.

5/8" (16mm) 6 x 37 class

5/8" (16mm) 19 x 7 class

19 x 7 is non-spin rope intended for single line work and is not recommended for multiple part reeving.

HOOK BLOCKS - Optional

1. 30 ton (27.2 metric ton) - 4 sheaves with swivel hook and safety latch, for 5/8" (16mm) wire rope.

2. 22 ton (20 metric ton)-3 sheaves with swivel hook and safety latch, for 5/8" (16mm) wire rope.

3. 4.4 ton (4.0 metric ton) - Weighted hook with swivel and safety latch, for 5/8" (16mm) wire rope.

HYDRAULIC SYSTEM

PUMPS - Tandem gear pump for telescope, elevation, and hoist. Tandem gear pump for swing, outriggers, steering and optional equipment. Powered by carrier engine. Pump disconnect for crane is engaged/disengaged by rotary switch from operator's cab.

CONTROL VALVES - Multiple valves actuated by hand levers with integral pressure relief valves.

RESERVOIR - 116 gallon (438 lit.) capacity. External sight level gauge.

FILTRATION - 26 micron return filter, full flow with bypass protection, located inside of hydraulic reservoir. Accessible for easy replacement.

CAB AND CONTROLS

Both crane and drive operations can be performed from one cab mounted on rotating superstructure.

Left side, 1 man type, steel construction with sliding door access and safety glass windows opening at side, rear and roof. Wind-shield glass window is shatter-resistant. Tilt-telescoping steering wheel. Adjustable control levers for swing, boom telescoping, boom hoist, auxiliary hoist and main hoist (with swing free-lock selector switch). Control levers for swing and boom hoist can change neutral positions and tilt for easy access to cab. Engine throttle knob. Foot operated controls: boom hoist, service brake and engine throttle.

Dash-mounted engine start/stop, monitor lamps, cigarette lighter, parking brake switch, steering mode select switch, rear steering lock switch.

Instruments - Torque converter oil temperature, engine water temperature, air pressure, fuel, hydraulic oil pressure, speedometer, tachometer and hour meter.

Tadano electronic LOAD MOMENT INDICATOR system (AML-M) including:

- Control lever lockout function
- Working radius and/or boom angle preset function (warning only)
- Warning buzzer
- Boom angle/boom length/jib offset angle/working radius/rated loads/actual loads read out
- Ratio of actual load moment to rated load moment indication
- Working condition register switch
- External warning lamp

Operator's cab console includes transmission gear selector, pump engaged/disengaged switch, suspension spring lock switch, outrigger controls, sight level bubble, drive selector switch, swing free-lock selector switch, working light switch and ashtray. Swing lock knob, swing brake and 4 way adjustable seat with high back (with seat belt).

CARRIER SPECIFICATIONS

TYPE - Rear engine, left hand steering, driving axle 2-way selected type by manual switch, 4 x 2 front drive, 4 x 4 front and rear drive.

FRAME - High tensile steel, all welded box construction.

AUTOMATIC TRANSMISSION - Electronically controlled full automatic transmission. Torque converter driving full powershift with driving axle selector. 6 forward and 2 reverse speeds, constant mesh.

3 speeds - high range - 2 wheel drive; 4 wheel drive
3 speeds - low range - 4 wheel drive

TRAVEL SPEED - 31.2 mph maximum.

AXLE - Front: Full floating type, steering and driving axle with planetary reduction. Rear: Full floating type, steering and driving axle with planetary reduction. Non-spin differential.

STEERING - Hydraulic power steering controlled by steering wheel. Three steering modes available: 2 wheel front, 4 wheel coordinated and 4 wheel crab.

SUSPENSION - Front: Semi-elliptic leaf springs with hydraulic lockout device. Rear: Semi-elliptic leaf springs with hydraulic lockout device

BRAKE SYSTEMS - Service: Air over hydraulic disc brakes on all 4 wheels. Parking/Emergency: Spring applied—air released brake acting on input shaft of front axle.

TIRES Standard 20.5 x 25-20 PR (OR),
Optional 16.0 x 25-20 PR (OR),

OUTRIGGERS - Four hydraulic, beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve. Each outrigger beam and jack is controlled independently from cab. Beams extend to 19' 3/8" (5.8m) center-line and retract to within 8' 1 5/8" (2.48m) overall width with floats. Outrigger jack floats are attached thus eliminating the need of manually attaching and detaching them. Controls and sight bubble located in upper structure cab.

ENGINE

| | |
|-------------------------------|---|
| Model | Mitsubishi 6D14T |
| Type | Direct Injection Diesel |
| No. of cylinders | 6 |
| Combustion | 4 cycle, turbo charged |
| Bore x Stroke, in. (mm) | 4.331 x 4.527 (110 x 115) |
| Displacement, cu. in (liters) | 400 (6.557) |
| Air inlet heater | 24 volt preheat |
| Air cleaner | Dry type, replacement element (dual) |
| Oil filter | Full flow with replacement element |
| Fuel Filter | Full flow with replacement element |
| Fuel tank, gal. (liters) | 66.0 (250), right side of carrier |
| Cooling | Liquid pressurized, recirculating by-pass |

| | |
|------------------------------|--|
| Radiator | Fin and tube core, thermostat controlled |
| Fan, in. (mm) | Blower type, 8-blade, 23.6 (600) dia. |
| Starting | 24 volt |
| Charging | 24 volt system, negative ground |
| Battery | 2 - 140 amp. hour |
| Compressor, air, CFM (l/min) | 21.3 CFM (602) at 2,000 rpm |
| Horsepower,(kW) | Net 180 (134) at 2600 rpm |
| Torque, Max. ft-lb (kgm) | 420 (58) at 1600 rpm |
| Capacity, gal. (liters) | |
| Cooling water | 3.4 (13) |
| Lubrication | 3.7~4.2(14~16) |

STANDARD EQUIPMENT

- Three section full power synchronized boom 29.5' - 72.2' (9.0m - 22.0m)
- Single stage stowable lattice jib 24.6' (7.5m) with 5°, 25°, 45° pinned offset (tilt type)
- Boom hoist foot control
- Boom angle indicator
- Variable speed main hoist driven by axial piston motor
- Tadano twin swing system
- 4 x 4 x 4 drive
- Hydraulic lockout suspension system
- Independently controlled outriggers
- Self-storing outrigger pads
- Electronic controlled automatic transmission driven by torque converter
- Complete highway light package
- Anti two block device (Overwind cutout)
- Electronic crane monitoring system
- Tadano electronic load moment indicator system (AML-M) including:
 - Control lever lockout function
 - Working radius and/or boom angle preset function (warning only)
 - Warning buzzer
 - Boom angle/boom length/jib offset angle/working radius/ rated loads/actual loads read out
 - Ratio of actual load moment to rated load moment indication
 - Working condition register switch
 - External warning lamp
- Front windshield wiper and washer
- Roof windshield wiper
- Roof windshield lock warning
- Rear view mirrors (right and left side)
- 4 way adjustable seat with high back

- Tilt-telescoping steering wheel
- Neutral position adjustable control lever (swing and boom hoist)
- Seat belt
- Cab floor mat
- Electric fan in cab
- Back up alarm
- Low oil pressure/high water temperature warning device (visual)
- Fenders
- Towing hooks - front and rear
- Lifting eyes
- Tool storage compartment
- Full instrumentation package
- Pump disconnect in operator's cab
- Non-spin rear differential
- Water separator with filter
- Flood lights
- Outrigger hose protection
- 24 volt electric system
- 24 volt start
- Tire inflation kit (with tire pressure gauge)

OPTIONAL EQUIPMENT

- Variable speed auxiliary hoist with cable follower
- Auxiliary lifting sheave (single top) stowable
- 30 ton (27.2 metric ton) 4 sheave hook block
- 4.4 ton (4 metric ton) hook ball and swivel
- Heater
- Optional tires 16.00 X 25 —20PR (OR)
- Fire extinguisher
- Tool kit
- Drum rotation indicator (thumper type) main and/or aux hoist

HOISTING SPECIFICATIONS

LINE SPEEDS AND PULLS

| Layer | Speed | Main or auxiliary hoist - 12 5/8" (0.32 m) drum | | | | | |
|------------------|-------|---|-------|------------------------|------|--------------------------|------|
| | | Line Speeds ² | | Line pulls | | | |
| | | F.P.M | m/min | Available ¹ | | Permissible ⁴ | |
| | | | | Lbs. | kgf | Lbs. | kgf |
| 1st | Low | 118 | 36 | 11,086 | 5028 | 10,078 | 4571 |
| | High | 236 | 72 | | | | |
| 2nd | Low | 130 | 40 | 10,642 | 4827 | 9675 | 4388 |
| | High | 259 | 79 | | | | |
| 3rd | Low | 141 | 43 | 10,270 | 4658 | 9336 | 4235 |
| | High | 282 | 86 | | | | |
| 4th | Low | 153 | 47 | 9953 | 4515 | 9048 | 4104 |
| | High | 305 | 93 | | | | |
| 5th | Low | 164 | 50 | 9680 | 4391 | 8800 | 3992 |
| | High | 328 | 100 | | | | |
| 6th ³ | Low | 176 | 54 | 9442 | 4283 | 8584 | 3893 |
| | High | 351 | 107 | | | | |

¹Developed by machinery with first layer of wire rope, but not based on rope strength or other limitation in machinery or equipment.

²Line speeds based only on hook block, not loaded.

³Sixth layer of wire rope is not recommended for hoisting operations.

⁴Permissible line pull may be affected by wire rope strength.

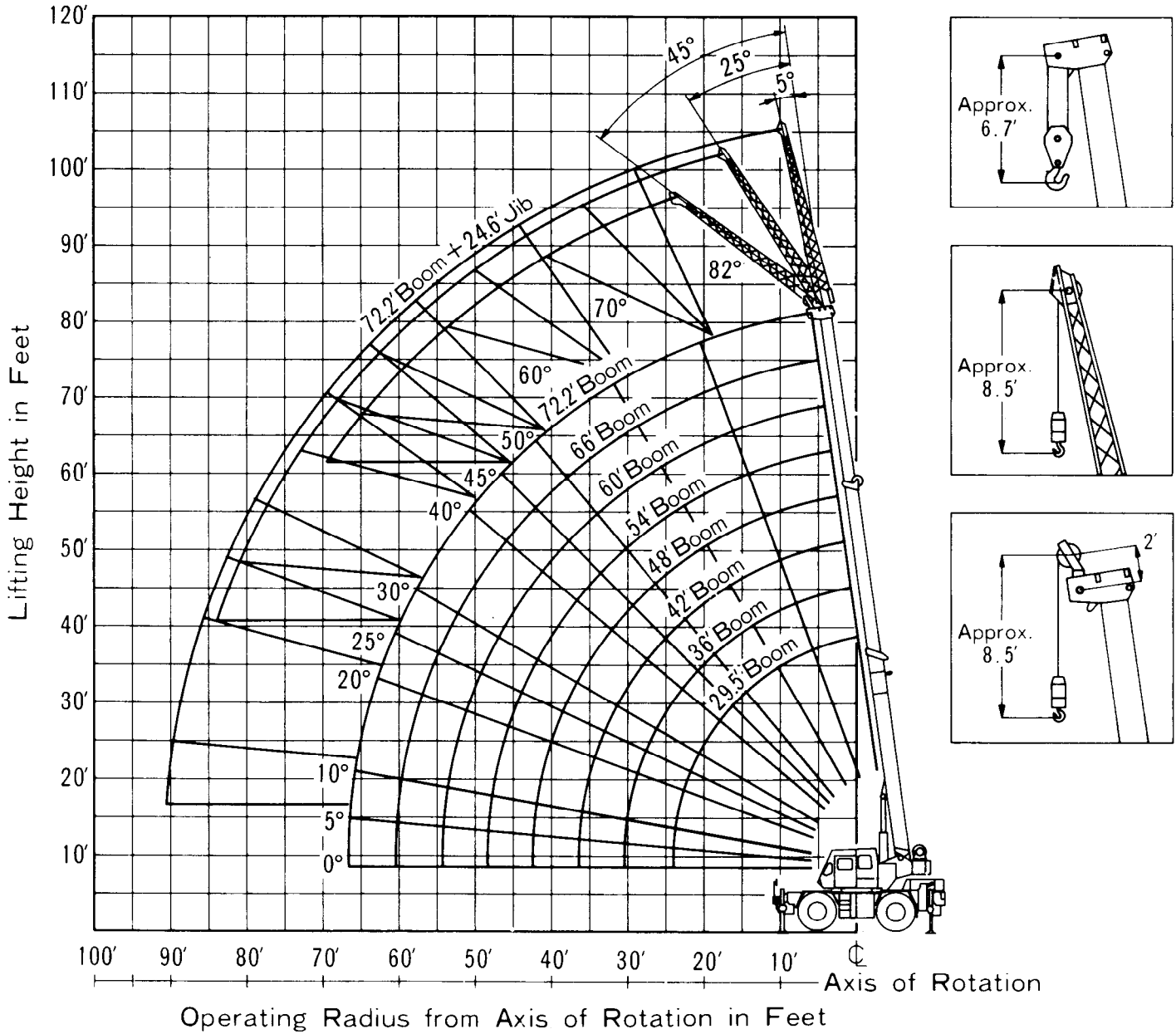
DRUM WIRE ROPE CAPACITIES

| Wire Rope Layer | Main Drum Grooved Lagging 5/8" (16 mm) wire rope | | | | Aux. Drum Grooved Lagging 5/8" (16 mm) wire rope | | | |
|-----------------|--|--------|-----------------|--------|--|--------|-----------------|--------|
| | Rope per layer | | Total wire rope | | Rope per layer | | Total wire rope | |
| | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters |
| 1 | 99 | 30.1 | 99 | 30.1 | 54 | 16.4 | 54 | 16.4 |
| 2 | 108 | 32.9 | 207 | 63.0 | 59 | 17.9 | 113 | 34.3 |
| 3 | 117 | 35.8 | 324 | 98.8 | 64 | 19.5 | 117 | 53.8 |
| 4 | 127 | 38.7 | 451 | 137.5 | 69 | 21.0 | 245 | 74.8 |
| 5 | 136 | 41.6 | 588 | 179.1 | 74 | 22.6 | 320 | 97.4 |
| 6 | 146 | 44.5 | 734 | 223.6 | 79 | 24.2 | 399 | 121.6 |

DRUM DIMENSIONS

| | MAIN | | AUXILIARY | |
|-----------------|---------|-------|-----------|-------|
| | Inch | mm | Inch | mm |
| Root Diameter | 12 5/8 | 320 | 12 5/8 | 320 |
| Length | 19 1/16 | 484.5 | 10 3/8 | 263.5 |
| Flange Diameter | 20 7/8 | 530 | 20 7/8 | 530 |

OPERATING RADIUS/LIFTING HEIGHT CHART



NOTE: Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

TR-280XL TOTAL RATED LOAD CHART (IN POUNDS)

| ON OUTRIGGERS FULLY EXTENDED 360° ROTATION | | | | | | | | | | | | |
|--|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------------|------------------------------------|-------|-------|
| Load Radius in Feet | Boom Length in Feet | | | | | | | | Boom Angle in Degree | Boom Length in Feet | | |
| | 29.5 (9.0m) | 36 (11.0m) | 42 (12.8m) | 48 (14.6m) | 54 (16.5m) | 60 (18.3m) | 66 (20.1m) | 72.2 (22.0m) | | 72.2(22m) Boom + 24.6(7.5m) Jib | | |
| 10 | 56,000 (60°) | 36,000 (66°) | 36,000 (70°) | 35,000 (73°) | 29,750 (75°) | 29,150 (76°) | 22,250 (77°) | 20,850 (80°) | 5° tilt | | | |
| 12 | 40,000 (56°) | 36,000 (62°) | 36,000 (67°) | 35,000 (70°) | 29,750 (72°) | 29,150 (74°) | 22,250 (76°) | 20,850 (77°) | 80° | 8,800 | 4,410 | 3,300 |
| 15 | 31,700 (48°) | 31,500 (57°) | 31,500 (62°) | 31,200 (66°) | 29,750 (69°) | 29,150 (71°) | 22,250 (73°) | 20,850 (74°) | 75° | 8,260 | 4,410 | 3,300 |
| 20 | 24,000 (32°) | 24,000 (47°) | 24,000 (54°) | 24,000 (59°) | 24,000 (63°) | 23,100 (66°) | 22,250 (68°) | 20,850 (70°) | 70° | 6,920 | 4,410 | 3,100 |
| 25 | | 18,800 (45°) | 18,800 (45°) | 18,800 (45°) | 18,800 (45°) | 18,800 (45°) | 18,300 (64°) | 17,650 (66°) | 65° | 5,920 | 4,000 | 2,960 |
| 30 | | 15,900 (9°) | 15,900 (34°) | 15,900 (34°) | 15,900 (34°) | 15,900 (34°) | 15,300 (58°) | 14,950 (61°) | 60° | 5,190 | 3,750 | 2,860 |
| 35 | | | 12,900 (16°) | 12,900 (34°) | 12,900 (43°) | 12,900 (49°) | 12,900 (53°) | 12,700 (57°) | 55° | 4,590 | 3,560 | 2,760 |
| 40 | | | | 10,800 (19°) | 10,800 (34°) | 10,800 (42°) | 10,800 (47°) | 10,800 (52°) | 50° | 4,090 | 3,400 | 2,660 |
| 45 | | | | | 9,020 (21°) | 9,020 (34°) | 9,020 (41°) | 9,020 (46°) | 45° | 3,710 | 3,290 | 2,550 |
| 50 | | | | | | 7,420 (23°) | 7,420 (34°) | 7,420 (41°) | 40° | 3,420 | 3,180 | |
| 55 | | | | | | | 6,200 (24°) | 6,200 (34°) | 35° | 3,190 | 3,100 | |
| 60 | | | | | | | | 5,200 (6°) | 30° | 2,820 | 2,800 | |
| 65 | | | | | | | | 5,200 (25°) | 25° | 2,530 | 2,500 | |
| | | | | | | | | 4,400 (12°) | 20° | 2,300 | | |
| | | | | | | | | | 15° | 2,100 | | |
| | | | | | | | | | 10° | 1,900 | | |
| | | | | | | | | | 5° | 1,800 | | |

1,650 lbs. (750 kg) shall be subtracted from the total rated load of the main boom when jib is attached to the main boom head.

WARNING AND OPERATING INSTRUCTIONS FOR LIFTING CAPACITIES

GENERAL

- Total rated loads shown on the TOTAL RATED LOAD CHART apply only to the machine as originally manufactured and normally equipped by TADANO LTD. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
- Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the operation, safety and maintenance manual supplied with machine. If this manual is missing, order replacement through the distributor.
- The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) safety standards for cranes.

SET UP

- Total rated loads shown on the chart are the maximum allowable crane capacities and are based on the machine standing level on firm supporting surface under ideal job conditions. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
- For outrigger operation, outriggers shall be fully extended with tires free of supporting surface before operating crane.

OPERATION

- Total rated loads with outriggers fully extended do not exceed 85% of the tipping loads as determined by SAE Crane Stability Test Code J-765.
- Total rated loads above bold lines in the chart are based on crane strength and those below, on its stability. They are based on actual load radius increased by boom deflection.
- Total rated loads include the weight of main hook block (600 lbs for 30 tons capacity), auxiliary hook ball (220 lbs for 4.4 tons capacity), sling and auxiliary lifting devices and their weights shall be subtracted from the listed capacities to obtain the net load to be lifted.
- Total rated loads are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tires, operating speeds, side loads, etc. Side pull on boom or jib is extremely dangerous.
- Total rated loads do not account for wind on lifted load or boom. Total rated loads and boom length shall be appropriately reduced, when wind velocity is above 20 mph (9m/sec.).
- Total rated loads at load radius shall not be exceeded. Do not tip the crane to determine allowable loads.
- Do not operate at boom lengths beyond radii or boom angle, where no capacities are shown. Crane may overturn without any load on the hook.
- When boom length is between values listed, refer to the total rated loads of the next longer and next shorter booms for the same radius. The lesser of the two total rated loads shall be used.

- When making lifts at a load radius not shown, use the next longer radius to determine allowable capacity.
- Single line operation should not exceed 8,800 lbs (4000 kg).
- Loaded boom angles are approximate. The boom angle before loading should be greater to account for deflection.
- The 29.5' (9.0 m) boom length capacities are based on boom fully retracted. If not fully retracted [less than 36' (11.0 m) boom length], use the total rated loads for the 36' (11.0 m) boom length.
- Extension or retraction of the boom with loads may be attempted within the limits of the TOTAL RATED LOAD CHART. The ability to telescope loads is limited by hydraulic pressure, boom angle, boom length, crane maintenance, etc.
- For lifting capacity of single top, reduce the total rated loads of relevant boom by 550 lbs (250 kg). Capacities of single top shall not exceed 6,610 lbs (3000 kgs) including main hook.
- When erecting and stowing jib, be sure to retain it by hand or by other means to prevent its free movement.
- 1650 lbs (750 kgs) shall be subtracted from the total rated loads of the main boom, when jib is attached to main boom head. Jib weight is 770 lbs (350 kgs).
- Use Anti-Two Block (OVERWIND CUTOFF) disable switch when erecting and stowing the jib and stowing the hook block. While the switch is pushed, the hoist does not stop, even when overwind condition occurs.
- For boom lengths with 24.6' (7.5 m) Jib, total rated loads are determined by loaded boom angle only in the column headed "72.2' (22 m) Boom + 24.6' (7.5m) Jib". For boom angles not shown, use the next lower loaded boom angle to determine allowable capacity.
- When lifting a load by using jib (auxiliary hoist) and boom (main hoist) simultaneously, do the following:
 - Illuminate the jib indicator lamps and make the jib offset display screen indicate the same value as the actual offset by repeatedly pushing the boom state register switch.
 - Before starting operation, make sure that the weight of load is within the total rated load for jib.

DEFINITIONS

- Load Radius:** Horizontal distance from a projection of the axis of rotation to supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- Loaded Boom Angle:** The angle between the boom base section and the horizontal after lifting the total rated load at the load radius.
- Working Area:** Area measured in a circular arc about the centerline of rotation.
- Freely Suspended Load:** Load hanging free with no direct external force applied except by the hoist line.
- Side Load:** Horizontal side force applied to the lifted load either on the ground or in the air.

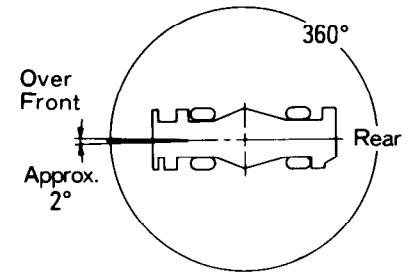
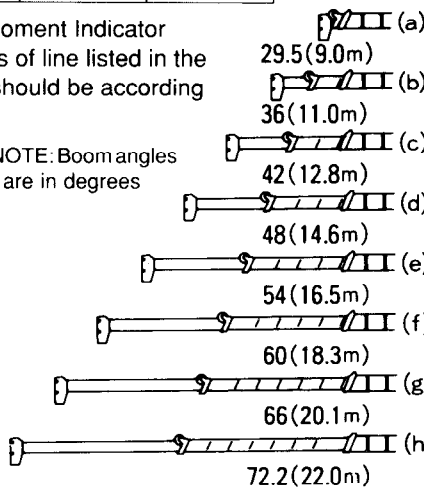
| Boom Length in Feet (meters) | 29.5' (9.0) | 36' to 60' (11.0 to 18.3) | 66' to 72.2' (20.1 to 22.0) | On Rubber 29.5' to 72.2' (9.0 to 22.0) | Single top Jib |
|------------------------------|-------------|---------------------------|-----------------------------|--|----------------|
| No. of part line | 8 | 6 | 4 | 4 | 1 |

The lifting capacity data are stored in the Load Moment Indicator (AML-M) based on the standard number of parts of line listed in the above chart. Standard number of parts of line should be according to the above chart.

TIRE-20.5-25-20PR

| ON RUBBER | | | |
|---------------------|------------|---------------|------------|
| Load Radius in Feet | Stationary | | Creep |
| | Over Front | 360° Rotation | Over Front |
| 10 | 32,000(a) | 23,700(f) | 24,650(a) |
| 12 | 27,800(a) | 17,800(g) | 21,200(a) |
| 15 | 20,300(c) | 12,400(h) | 17,380(c) |
| 20 | 13,470(d) | 7,720(h) | 13,470(d) |
| 25 | 9,650(h) | 5,220(h) | 9,650(h) |
| 30 | 7,250(h) | 3,650(h) | 7,250(h) |
| 35 | 5,570(h) | 2,600(h) | 5,570(h) |
| 40 | 4,350(h) | 1,840(h) | 4,350(h) |
| 45 | 3,430(h) | 1,250(h) | 3,430(h) |
| 50 | 2,730(h) | | 2,730(h) |

NOTE: Boom angles are in degrees



Max. Permissible Boom Length in Feet for On Rubber Lifting Capacities.

- | | |
|------------------|------------------|
| (a) 29.5 (9.0m) | (e) 54 (16.5m) |
| (b) 36 (11.0m) | (f) 60 (18.3m) |
| (c) 42 (12.8m) | (g) 66 (20.1m) |
| (d) 48 (14.6m) | (h) 72.2 (22.0m) |

WARNING AND OPERATING INSTRUCTIONS FOR ON RUBBER CAPACITIES

- Total rated loads on rubber are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J-765.
- Total rated loads shown in the chart are based on condition that crane is set on firm level surfaces with suspension lock applied. Those above bold lines are based on tire capacity and those below, on crane stability. They are based on actual load radius increased by tire deformation and boom deflection.
- Total rated loads are based on proper tire inflation, capacity and condition. Damaged tires are hazardous to safe operation of crane.
- Tires shall be inflated to correct air pressure.

TIRE AIR PRESSURE

16.00-25-20PR—79 psi (5.5 kgf/cm²)
20.50-25-20PR—80 psi (5.6 kgf/cm²)
- Over front operation shall be performed within two degrees in front of chassis.
- On rubber lifting with "jib" and "auxiliary lifting sheave" (single top) are not permitted.
- When making lift on rubber, set parking brake.
- For creep operation, boom must be centered over front of machine, swing lock engaged, and load restrained from swinging. Travel slowly and keep the lifted load as close to the ground as possible, and especially avoid any abrupt steering, accelerating or braking.
- Do not operate the crane while carrying the load.
- Creep is motion for crane not to travel more than 200 feet (60 m) in any 30 minute period and to travel at the speed of less than 1 mph (1.6 km/h).

WARNING AND OPERATING INSTRUCTIONS FOR USING THE LOAD MOMENT INDICATOR (AML-M)

Notes for Load Moment Indicator

- When operating crane on outriggers:
 - Set P.T.O. switch to "ON".
 - Push the outrigger state register switch to illuminate the outrigger indicator lamps.
 - Push the boom state register switch repeatedly until the state of the indicator lamps and the offset display screen conforms to the actual state of the boom, the single top and the jib.
 - When erecting and stowing jib, push boom state register switch repeatedly until jib indicator lamps flicker (in jib erection/stowing mode).
 - When operating crane on rubber:
 - Lock suspension springs with boom over front and crane in traveling configuration.
 - Set P.T.O. switch to "ON".
 - Push the boom state register switch repeatedly to illuminate the boom indicator lamp.
 - Push the on rubber state register switch to illuminate the on rubber indicator lamps. By repeatedly pushing the on rubber register switch, stationary and creep operation are selected alternately. When creep operation is selected, the on rubber indicator lamps flicker.
- However, pay attention to the following.
- For stationary operation.
 - The front capacities are attainable only when the over front indicator lamp is on. When the boom is more than 2 degrees from centered over front of chassis, 360° capacities are in effect.
 - When a load is lifted in the front position and then swung to the side area, make sure the value of the LOAD MOMENT INDICATOR (AML-M) is below the 360° lifting capacity.
 - For creep operation.
 - The creep capacities are attainable only when boom is in the straight forward position of chassis and the over front indicator is on. If boom is not in the straight forward position of chassis, never lift load.
 - During crane operation, make sure that the displays on front panel are in accordance with actual operating conditions.
 - The displayed values of LOAD MOMENT INDICATOR (AML-M) are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tire, operating speed, side loads, etc. For safe operation, it is recommended when extending and lowering boom or swinging, lifting loads shall be appropriately reduced.
 - LOAD MOMENT INDICATOR (AML-M) is intended as an aid to the operator. Under no condition should it be relied upon to replace use of capacity charts and operating instructions. Sole reliance upon LOAD MOMENT INDICATOR (AML-M) aids in place of good operating practice can cause an accident. The operator must exercise caution to assure safety.


TR-280XL Axle Weight Distribution Chart

| | Pounds | | | Kilograms | | |
|--|----------------------|----------------------|------------------------|----------------------|----------------------|----------------------|
| | GVW | Front | Rear | GVW | Front | Rear |
| Basic standard machine includes: 29.5'—72.2' (9.0—22.0m) 3-section boom 24.6' (7.5m) jib main hoist with 492 ft (150m) of 5/8" (16mm) wire rope 30 ton (27.2 metric ton) hookblock 4.4 ton (4 metric ton) hookblock 4360 lbs. (2100kg) counterweight 882 lbs. (400kg) counterweight Mitsubishi 6D14T engine; 20.5 X 25—20 PR tires | 51,545 | 25,926 | 25,619 | 23,381 | 11,760 | 11,621 |
| Add: Auxiliary hoist with 223' (68m) of 5/8" (16mm) wire rope Auxiliary lifting sheave (single top) | +1,049 + 95 | -172 +269 | +1,221 - 174 | +476 + 43 | -78 +122 | +554 - 79 |
| Remove: 30 ton (27.2 metric ton) hookblock 4.4 ton (4 metric ton) hookblock 882 lbs. (400kg) counterweight | -600 -220 -882 | -996 +102 +168 | +396 -322 -1,050 | -272 -100 -400 | -452 + 46 + 76 | +180 -146 -476 |

4630 lbs (2100kg) counterweight used with main hoist and auxiliary hoist.
 882 lbs. (400kg) counterweight used to add to 4630 lbs (2100 kg) with main hoist only.

MDI/TADANO HYDRAULIC CRANES
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2011 West Sam Houston Parkway North
 Houston, Texas 77043-2421
 Phone 713-467-1234 Fax 713-467-3232